

REMARKS

Claims 22-40, 42-45, and 47-54 are pending in the present application. In the Final Office Action mailed January 11, 2008, the Examiner provisionally rejected claims 22-40, 42-45, and 47-54 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17, 23, and 24 of copending Application No. 10/605,546 (US 2005/0016979) in view of McCormick (USP 6,026,682). The Examiner next rejected claims 22-39, 43, 47, and 51-54 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 51-53 were rejected under 35 U.S.C. §102(b) as being anticipated by McCormick. Claims 22-40, 42-45, and 47-54 were rejected under 35 U.S.C. §103(a) as being unpatentable over Prunier (FR 2 536 320) in view of McCormick. Claims 22-40, 42-45, and 47-54 were rejected under 35 U.S.C. §103(a) as being unpatentable over Behnke et al. (USP 2,510,207) in view of McCormick.

On March 6, 2008, the undersigned telephoned the Examiner to discuss the rejections of the claims under §102(b) as being anticipated by McCormick and under §103(a) as being unpatentable over Prunier and/or Behnke et al. in view of McCormick. The undersigned appreciates the time that the Examiner allotted to discuss this matters. A discussion ensued regarding portions of the McCormick reference made of record in rejecting the claims. Upon further discussion, the Examiner and the undersigned agreed that each of independent claims 22, 30, 40, and 44 is patentably distinct over the combination of cited references at least for the reasons set forth below. As requested by the Examiner, the following summarized the discussion.

It was further agreed that claim 51 should be amended to further clarify what is being called for therein. That is, to clearly set forth that the “controller” is not a user/operator of the device, claims 51-53 have been amended per the Examiner’s suggestion to include a controller and sensing device combination.

Rejection under 35 U.S.C. §102(b)

As amended, claim 51 calls for a controller and sensing device combination configured to detect connection of a welding-type component to a coolant source and, upon connection, permit circulation of coolant through the welding-type component only upon activation of the welding-type component. Conversely, McCormick discloses a coolant system safety device 10 for an automated welding machine that includes a microprocessor 104 configured to monitor pressure flow sensors 100, 102 that measure an already existing coolant flow rate to and from a welding component in a coolant supply tube 30 and coolant return tube 36. *McCormick*, Col. 2, ln. 43 to

Col. 3, ln. 5. The flow of coolant to the welding component is monitored, and if the flow is outside a set threshold, a solenoid valve 40 is actuated to shut-off flow of the coolant to the welding component. *McCormick*, Col. 3, lns. 5-11. *McCormick*, however, does not teach that pressure flow sensors 100, 102 act to determine a connection status of the welding component to the coolant source (i.e., coolant supply tube 30) or that any subsequent coolant flow be allowed only upon connection of the welding component and the coolant source. In light of at least the above, claim 51 is patentably distinct over the art of record Applicant respectfully requests withdrawal of the rejection thereof.

Rejections under 35 U.S.C. §103(a)

The Examiner rejected claim 22 under §103(a) over Prunier or Behnke et al. in view of *McCormick*, relying upon *McCormick* for teaching one or more temperature and/or pressure sensors in cooperation with a dynamic control means in order to automatically shut down (deactivate) the flow of coolant in the event of a fault. Claim 22 calls for, in part, a sensing device positioned in relative proximity to the coolant supply outlet and configured to provide a component connection status output indicative of connection status of the welding-type component to the coolant supply outlet. It was agreed that the combination of Prunier or Behnke et al. and *McCormick* fails to teach or suggest such a sensing device.

As set forth above, *McCormick* discloses a coolant system safety device 10 for an automated welding machine. Safety system 10 includes a microprocessor 104, 244 configured to monitor pressure flow sensors 100, 102 that measure coolant flow rate to and from a welding component in a coolant supply tube 30 and coolant return tube 36. *McCormick*, Col. 2, ln. 43 to Col. 3, ln. 5. Safety device 10 further includes a temperature sensor IC 334 that measures a temperature of the coolant and is connected to the microprocessor 104, 224 to transfer the temperature data thereto. The microprocessor has trip points programmed therein that, when crossed, stops a welding operation (i.e., deactivates a welding component). *McCormick*, Col. 9, lns. 44-50. That is, when the temperature of the coolant as measured by temperature sensor 334 crosses a preset trip point, a welding operation is terminated and coolant flow shut-off. *Id.*

McCormick, however, does not teach or suggest that which is called for in claim 22, which calls for a sensing device positioned in relative proximity to the coolant supply outlet and configured to provide a component connection status output indicative of connection status of the welding-type component to the coolant supply outlet. Accordingly, claim 22 is patentably distinct over the art of record, and Applicant respectfully requests withdrawal of the rejection thereof.

Claim 30 was also rejected under §103(a) over Prunier or Behnke et al. in view of McCormick. Claim 30 calls for, in part, a cooling system including a sensing device configured to provide a component connection status output indicative of connection status of the welding-type component to the coolant supply outlet and a controller adapted to electronically communicate with the sensing device to receive the component connection status output prior to activation of the welding-type component and to automatically affect circulation of coolant from the coolant source through the coolant supply outlet and the coolant conduit to the welding-type component when the connected welding-type component is activated.

As set forth above, McCormick discloses a system 10 in which sensors 100, 102 function to measure a coolant flow. While the system 10 in McCormick may be able to determine that a welding component is disconnected to a coolant supply tube 30 and/or coolant return tube 36, such determination can only be made based on a measure of coolant flow rate or coolant pressure after a welding operation has begun and coolant flow has commenced. This is not what is called for in claim 30, which sets forth that controller determines a detection status prior to activation of the welding-type component, and thus prior to circulation of the coolant. Accordingly, claim 30 is patentably distinct over the art of record, and Applicant respectfully requests withdrawal of the rejection thereof.

Claim 40 was also rejected under §103(a) over Prunier or Behnke et al. in view of McCormick. Claim 40 calls for, in part, welding system including a controller configured to detect a connection status of a welding torch to a cooler prior to circulation of coolant to the welding torch and regulate the cooler such that coolant is prevented from circulating if the welding torch is disconnected from the cooler. That is, coolant is circulated only if a connection between the welding torch and the cooler is detected. As set forth in detail above, McCormick simply does not teach such a configuration, but instead, teaches a system 10 having pressure flow sensors 102, 104 that measure a coolant flow rate, with no mechanism to detect a connection status prior to circulation of coolant. Accordingly, claim 40 is patentably distinct over the art of record, and Applicant respectfully requests withdrawal of the rejection thereof.

Claim 44 was rejected under §103(a) over Prunier or Behnke et al. in view of McCormick. Claim 44 calls for a welding system having a cooler connected to a welding torch and designed to circulate coolant to the welding torch, the cooler including a torch connection sensor configured to transmit a torch connection signal to the controller when the welding torch is connected to the cooler, the torch connection signal acquired absent circulation of the coolant. As set forth above, the microprocessor 104 and flow sensors 100, 102 of McCormick do not

determine such a connection status. Coolant flow is needed in the system of McCormick in order for pressure flow sensors 102, 104 to detect an error in coolant flow (i.e., flow rate or pressure outside a threshold) that may be the result of a cooling tube leak or disconnection of the tube to the welding component. Accordingly, claim 44 is patentably distinct over the art of record, and Applicant respectfully requests withdrawal of the rejection thereof.

Claim 54 calls for a welding-type power source including means for automatically circulating coolant through at least the welding-type power means upon activation of the outputting welding-type power means only if the detecting means detects connection of the outputting welding-type power means to the cooling means. That is, coolant is circulated only if a connection between the outputting welding-type power means and the cooling means is detected. As set forth in detail above, and discussed and agreed, McCormick does not teach such a configuration. This is not what is called for in claim 54. As such, claim 54 is patentably distinct over the combination Prunier or Behnke et al. and McCormick.

Rejection under 35 U.S.C. §112, Second Paragraph

The Examiner agreed to withdraw the 35 U.S.C. 112, second paragraph rejection based on a BPAI Decision¹ in one of Applicant's other cases.

Provisional Double Patenting Rejection

With respect to the provisional rejection of claims 22-40 and 42-54 under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-17, 23, and 24 of co-pending Application No. 10/605,546 in view of McCormick, Applicant notes that the distinctions addressed with respect to McCormick in each application are distinct from one another. One regards, maintaining coolant flow after deactivation of the torch ('546), and the other regards sensing connections ('657). The claims in each application are clearly not obvious when compared to one another, and the clear individual distinctions with McCormick are evidence that the two are not indistinct. Further, the Examiner has not shown a comparison of the two sets of claims against one another to satisfy an obviousness-type double patenting rejection.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 22-40, 42-45, and 47-54.

¹ For application Serial No. 10/249,018, *See Decision on Appeal*, January 11, 2008, p. 13-15.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.

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